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March 20, 2002

2317.108

**By Hand Delivery**

Mr. William Caton  
Acting Secretary  
Federal Communications Commission  
The Portals  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

**RECEIVED**

MAR 20 2002

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

**Re: Petition for Rulemaking  
Amendment of Section 73.622(b), DTV Table of Allotments  
LeSea Broadcasting Corporation, Licensee  
Station KWHM(TV), Wailuku, Hawaii (Facility ID 37105)**

Dear Mr. Caton:

Enclosed please find the original and four (4) copies of a Petition for Rulemaking to Amend the DTV Table of Allotments filed on behalf of LeSea Broadcasting Corporation. Should you have any questions about this filing, please do not hesitate to contact me.

Yours very truly,

  
Joseph C. Chautin, III

JCC,III:dbg  
Enclosure  
cc: Pete Sumrall  
Doug Garlinger  
Zack Izon (public file)

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02-69

**Before the**  
**FEDERAL COMMUNICATIONS COMMISSION**  
**Washington, D.C. 20554**

In re: ) **RECEIVED**  
LeSEA BROADCASTING )  
CORPORATION )  
Amendment of Section 73.622(b), Table )  
of Allotments, Digital Television )  
Broadcasting Stations )  
(Wailuku, Hawaii) )  
MM Docket No.: )  
RM - )  
FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY  
MAR 20 2002

**TO: Chief, Video Services Division**

**PETITION FOR RULEMAKING TO AMEND**  
**THE DTV TABLE OF ALLOTMENTS**

Pursuant to Section 1.401 of the Commission's rules, LeSea Broadcasting Corporation ("LeSea"), licensee of KWHM(TV), Wailuku, Hawaii, and permittee of BPCDT-19991020ABY for KWHM's digital facilities, hereby submits this Petition for Rulemaking to amend Section 73.622(b) to change the DTV allotment for KWHM(TV) from Channel 20 to Channel 45.

LeSea is seeking this amendment because it has been unable to obtain guarantees that it will be allowed to lease space on its current tower long enough to justify building out its digital facilities at this site.<sup>1</sup> In light of the limited lease opportunity on this tower, LeSea has explored other options which would allow them continuous access to a tower from which it could build out its DTV facilities. LeSea has joined several other broadcasters in the area who faced similar problems to create and fund a company that would build a single tower to support each station's digital broadcast operations. At this location, however, LeSea would not be able to construct KWHM's digital

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<sup>1</sup>Due to these problems, LeSea has filed an application for an extension of the May 1, 2002 DTV build out requirement. See File No: BEPCDT-20020226ABD.

facilities on channel 20 because of impermissible interference. This Petition to substitute channel 45 for channel 20 will enable KWHM to operate from this joint location.

As shown in the attached Engineering Study, marked "Exhibit One", LeSea's engineer has determined that the proposed channel change will be in compliance with the principal community cover requirements of Section 73.623(c)(1). Further, the new channel will not cause any interference above that allowed in Section 73.623(c)(2), nor will it cause interference to a Class A analog or digital station pursuant to Section 73.623(c)(5). Furthermore, there will be no interference with FM radio stations because LeSea is not seeking to switch to Channel 6. Finally, the proposed change meets the minimum geographical spacing requirements embodied in Section 73.623(d).

This proposed channel change is in the public interest because it will enable LeSea to reduce costs by achieving economies of scale in joining with other broadcasters, and ensure that the public will receive DTV service faster, from a superior site, and with no subsequent interruptions that would be caused by digital site relocations. Since the proposed reallocation is in full compliance with Sections 73.622 and 73.623 of the Commission's rules, LeSea respectfully requests that the Commission grant the proposed Petition for Rule Making. LeSea affirms that, should the Petition for Rulemaking be granted, it will file an application for the proposed facilities, and, if granted, construct the proposed facilities.

Respectfully submitted:

**LeSea Broadcasting Corporation**

By:

  
Joseph C. Chautin, III, Esq.  
HARDY, CAREY & CHAUTIN, L.L.P.  
110 Veterans Boulevard, Suite 300  
Metairie, Louisiana 70005  
(504) 830-4646  
Its Attorney

Engineering Study  
for  
Amendment to DTV Table of Allotments

DTV Channel 45  
Wailuku, Hawaii

March 18, 2002

Douglas W. Garlinger  
Director of Engineering  
LeSEA Broadcasting Corporation  
P.O. Box 50450  
Indianapolis, IN 46250

## DISCUSSION OF ENGINEERING REPORT

The purpose of this report is to establish the minimum technical criteria to amend the DTV Table of Allotments for a channel not included in the initial DTV table of allotments pursuant to FCC Rules and regulations 73.623. LeSEA Broadcasting requests the addition of DTV Channel 45 allotment to the city of Wailuku, Hawaii.

The following information shows compliance with the requirements of 73.623.

**73.623(c)(1)**

Exhibit E-1 demonstrates compliance with the principal community coverage requirements. The proposed geographical coordinates are: 20° 40' 58" N, 156° 19' 07" W. The proposed DTV Channel 45 would enable the planned co-location at the same coordinates contemplated by other DTV broadcasters serving Wailuku, Hawaii.

**73.623(c)(2), (3), (4) & (5)**

Exhibit E-2 is a Longley-Rice Study as per OET Bulletin No. 69 evaluating TV coverage and interference. Class A LPTV stations were considered as part of this study. No additional interference will occur to Class A stations as a result of the requested change in channel. This study demonstrates that the requested change complies with 73.623(c)(2), (3), (4) & (5).

**73.623(d)**

Exhibit E-3 is a Dataworld Study performed on February 14, 2002 showing that the proposed Channel 45 allotment meets the minimum geographic spacing requirements for DTV allotments not included in the initial DTV table of allotments.

**73.623(e)**

The proposed DTV Channel 45 is not within the channel range of 14-20 and does not require protection of land mobile operations on Channels 14-20.

**73.623(f)**

The proposed DTV Channel 45 will not operate on Channel 6 and does not require a separate engineering study for interference caused to FM radio stations.

**73.623(g)**

A negotiated agreement on interference is not included. The proposed change in the table of allotments does not create additional interference beyond that permitted by 73.623(c)(2).

**KWHM.D.45\_POLI**  
Latitude: 20-40-58 N  
Longitude: 156-19-07 W  
Power: 87.00 kW  
Channel: 45  
Frequency: 659.0 MHz  
AMSL Height: 2289.0 m  
Elevation: 2237.0 m  
Horiz. Pattern: Directional  
Vert. Pattern: Yes  
Elec Tilt: 0.0  
Prop Model: Longley/Rice  
Climate: Cont temperate  
Conductivity: 0.0050  
Dielec Const: 15.0  
Refractivity: 301.0  
Receiver Ht AG: 10.0 m  
Receiver Gain: 0 dB  
Time Variability: 90.0%  
Sit. Variability: 50.0%  
ITM Mode: Broadcast

**EXHIBIT E-1**

**Proposed DTV Channel 45 Coverage**

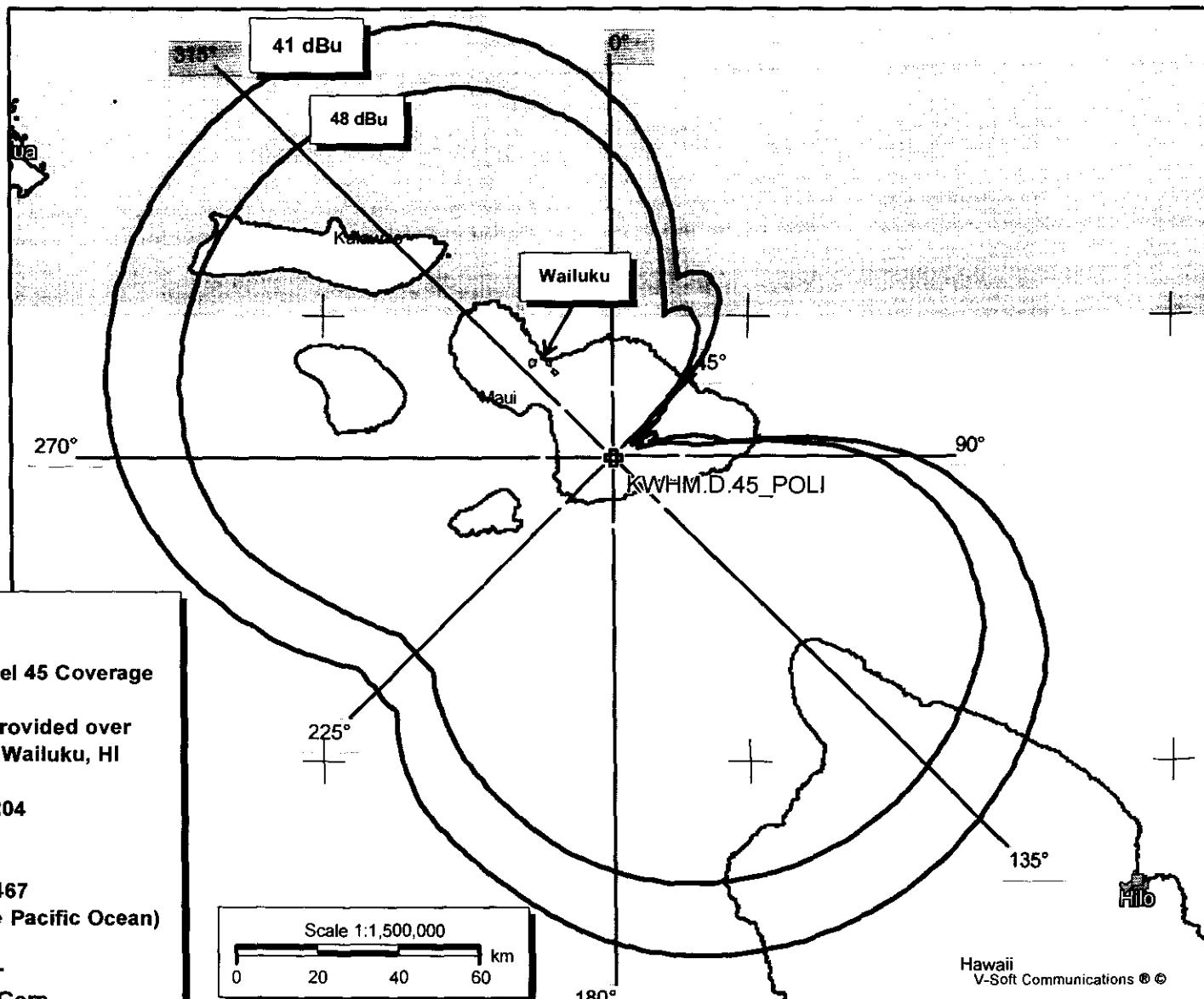
**Required Coverage provided over entire city of license; Wailuku, HI**

**POPULATION: 176,204  
(2000 Census)**

**AREA in Sq. Km. 31,467  
(includes areas of the Pacific Ocean)**

**Douglas W. Garlinger  
LeSEA Broadcasting Corp.**

**Study Date: 02/12/2002**



**EXHIBIT E-2**

**DTV Channel 45  
Wailuku, Hawaii  
Amendment to DTV Table of Allotments  
Engineering Study**

**as per OET Bulletin No. 69**

**using**

**Longley-Rice Methodology**

**for**

**Evaluating TV Coverage and Interference**

**Including consideration of Class A LPTV stations**

**March 18, 2002**

Douglas W. Garlinger  
Director of Engineering  
LeSEA Broadcasting Corporation  
P.O. Box 50450  
Indianapolis, IN 46250

## DISCUSSION OF LONGLEY-RICE STUDY

This report evaluates the proposed change to the DTV Table of Allotments.

Proposed Station:

Coordinates: 20° 40' 58" N,  
156° 19' 07" W.

|                  |  |
|------------------|--|
| City of License: | Wailuku, HI  |
| DTV Channel:     | 45   |
| DTV Power:       | 87 kW ERP  |
| ANT HAAT:        | 1298 Meters  |
| POPULATION:      | 176,204  |
| AREA in Sq. Km.  | 31,467 (this figure includes areas of the Pacific Ocean) |
| ANT PATTERN:     | SEE EXHIBIT E-4  |

This Engineering Report evaluates coverage and interference using the Longley-Rice methodology outlined in OET Bulletin No. 69, the Sixth Report and Order and the FCC Rules and Regulations.

This report employs V-Soft Communications PROBE II™ software to perform the study. Class A LPTV stations, FCC licensed facilities, FCC applications, FCC Construction Permits and DTV channel allotments were considered in the study. Unassigned NTSC Allocations were not considered in the study. The V-Soft Communications PROBE II™ software locates all stations within 600 km of the subject station for an incoming interference study and 1200 km for an outgoing interference study.

Stations that exceed the distancing rules and channel spacing requirements were removed from the study. Stations beyond the distance requirements were considered for masking interference.

The areas studied for interference were the overlap areas of the appropriate dipole-factor corrected contours of the stations under study. The areas under study were divided into rectangular 2 km cells. Each cell was analyzed for signal levels using the Irregular Terrain Model (ITM) version 1.2.2. The parameters and procedures used in the propagation study are those specified in Table 4 of OET-69.

The V-Soft Communications PROBE II™ software employs the 2000 US Census data for the individual cells to tabulate interference. The *de minimis* standard of no more than 2% additional interference and no more than 10% total interference to population served by the desired station is applied as outlined in Section 73.623 (c)(2). The appropriate D/U ratios are applied for Co- and Adjacent channels and NTSC Taboo channel relationships.

The proposed DTV Channel 45 was analyzed in an "outgoing" interference study to identify stations receiving interference. There were no stations identified as receiving interference as a result of the proposed DTV Channel 45 allotment.

Class A LPTV station KHLU-LP Channel 46 in Honolulu was also considered and received no additional interference as a result of the proposed DTV Channel 45 allotment.

There were no stations causing interference to the proposed Channel 45 allotment.

Incoming Interference Totals for proposed Channel 45 allotment.

| (area calculations include areas of the Pacific Ocean) |         |                    |
|--|---------|--------------------|
| Calculation Area Population:                           | 176,204 | ( 31467.0 sq. km ) |
| Not Affected by Terrain Loss:                          | 148,395 | ( 29498.6 sq. km ) |
| Total NTSC Interference:                               | 0       | ( 0.0 sq. km )     |
| DTV Only Interference:                                 | 0       | ( 0.0 sq. km )     |
| Total DTV Interference:                                | 0       | ( 0.0 sq. km )     |
| Interfered Population:                                 | 0       | ( 0.0 sq. km )     |
| Interference Free:                                     | 148,395 | ( 29498.6 sq. km ) |
| Percent Interference:                                  | 0.0     |                    |
| Terrain Blocked Population:                            | 27,809  | ( 1968.3 sq. km )  |
| Contour Area Population:                               | 176,623 |                    |

### **CONCLUSION:**

This study information demonstrates that the proposed DTV Channel 45 change in the DTV Table of Allotments complies with the requirements of FCC Rules and Regulations, Section 73.623(c).

## V-Soft Communications Population Report

KWHM.D.45\_POLI (45) Wailuku, HI  
TV Outgoing Interference Study  
Signal Resolution: 2 km  
Consider NTSC Taboo: Yes  
KWX error points are considered to  
be interference free coverage.  
# of radials computed for contours: 72  
Contours calculated using 8 radial HAAT.  
LR Profile Spacing Increment: 1.0 km  
Masked interference points are being counted  
as interference free.  
Using NTSC lptv/translators D/U rules.

Study Date: 02/14/2002  
TV Database Date: 02-08-02

Population Database: 2000 US Census

CLASS A LPTV Stations Considered

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| Call Letters   | City     | State | Dist  | Bear  |
|----------------|----------|-------|-------|-------|
| KHLU-L.C (46Z) | Honolulu | HI    | 201.2 | 293.4 |

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Stations which receive interference:

| Call Letters | H Units | Population | Area (sq. km) |
|--------------|---------|------------|---------------|
|--------------|---------|------------|---------------|

Totals for KWHM.D.45\_POLI

Total population to which interference is caused: 0

Total number of housing units to which interference is caused: 0

## V-Soft Communications Population Report

KWHM.D.45\_POLI (45) Wailuku, ??  
 TV Incoming Interference Study  
 Signal Resolution: 2 km  
 Consider NTSC Taboo: Yes  
 KWX error points are considered to  
     be interference free coverage.  
 # of radials computed for contours: 72  
 Contours calculated using 8 radial HAAT.  
 LR Profile Spacing Increment: 1.0 km  
 Interference considered within the  
     reference station's noise limited contour.  
 Using NTSC lptv/translators D/U rules.  
 Threshold for reception: 41.6

Study Date: 02/14/2002  
 TV Database Date: 02-08-02

Population Database: 2000 US Census (SF1)

Percentages calculated using a baseline population of 148,395.

Stations considered which do not cause interference:

KWBN (44Z)  
 KWBN.C (44Z)  
 KHLU-L.C (46Z)

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| Call Letters   | City     | State | Dist  | Bear  |
|----------------|----------|-------|-------|-------|
| KWBN (44Z)     | Honolulu | HI    | 165.8 | 295.9 |
| KWBN.C (44Z)   | Honolulu | HI    | 201.2 | 293.4 |
| KHLU-L.C (46Z) | Honolulu | HI    | 201.2 | 293.4 |

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Totals for KWHM.D.45\_POLI (45)

|                               |         |                    |
|-------------------------------|---------|--------------------|
| Calculation Area Population:  | 176,204 | ( 31467.0 sq. km ) |
| Not Affected by Terrain Loss: | 148,395 | ( 29498.6 sq. km ) |
| Total NTSC Interference:      | 0       | ( 0.0 sq. km )     |
| DTV Only Interference:        | 0       | ( 0.0 sq. km )     |
| Total DTV Interference:       | 0       | ( 0.0 sq. km )     |
| Interfered Population:        | 0       | ( 0.0 sq. km )     |
| Interference Free:            | 148,395 | ( 29498.6 sq. km ) |
| Percent Interference:         | 0.00    |                    |
| Terrain Blocked Population:   | 27,809  | ( 1968.3 sq. km )  |
| Contour Area Population:      | 176,623 |                    |

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|                     | Housing Units | Population | % of   |
|---------------------|---------------|------------|--------|
| County              |               |            |        |
| Hawaii              |               |            |        |
| Hawaii County       |               |            |        |
| County Pop          | 62,674        | 148,677    |        |
| KWHM.D.45_POLI (45) | 18,136        | 42,067     |        |
| Ix Free             | 18,136        | 42,067     | 100.00 |
| Kalawao County      |               |            |        |
| County Pop          | 172           | 147        |        |
| KWHM.D.45_POLI (45) | 137           | 123        |        |
| Ix Free             | 137           | 123        | 100.00 |
| Maui County         |               |            |        |
| County Pop          | 56,377        | 128,094    |        |
| KWHM.D.45_POLI (45) | 44,131        | 106,205    |        |
| Ix Free             | 44,131        | 106,205    | 100.00 |

**LeSEA Engineering  
Indianapolis, IN**

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Dataworld Digital TV Channel Study

**EXHIBIT E-3**

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**Job Title: KWHM-DTV45 Poli Poli Spacing**

Channel(s): 45 Zone II  
Coordinates: N 20° 40' 58.0" W 156° 19' 07.0"  
Safety Zone: 120.0 km (74.6 mi)  
TV translators included

**LeSEA Engineering  
Indianapolis, IN**

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Dataworld Digital TV Spacing Study

**Title: KWHM-DTV45 Poli Poli Spacing**

Latitude: N 20° 40' 58.0"

Channel: 45 Zone II (656-662 MHz) Digital

Longitude: W 156° 19' 07.0"

Database: DW 2/7/2002 6:02:39 PM

Safety Zone: 120.0 km

| Call City of License   | Auth | Licensee name                    | St | FCC File Number   | Chan Zone | HAAT(m) HAMSL(m) | ERP (kW) | Latitude        | Longitude        | Br-to -from | Dist (km) | Req (km) |
|--|------|----------------------------------|----|-------------------|-----------|------------------|----------|-----------------|------------------|-------------|-----------|----------|
| NEW Kahului  | App  | Charles C. Townsend, III         | HI | BPTTL-20000828AFS | 38 -      | 1984.0           | 50       | N 20° 46' 43.0" | W 156° 14' 51.0" | 34.7        | 12.94     | LPTV     |
| NEW Kailua-Kona  | App  | Trinity Christian Center of Sant | HI | BPTT-20000830BPD  | 38 -      | 1692.0           | 10       | N 19° 43' 04.0" | W 155° 55' 00.0" | 158.6       | 114.8     | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81; STL TO FEED WHR580;                       |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| KALO Honolulu  | Lic  | Pacifica Broadcasting Company    | HI | BLET-19990803LD   | *38 II    | 632.0 757.0      | 51.3     | N 21° 19' 49.0" | W 157° 45' 24.0" | 296.0       | 165.8     | 96.60    |
| License granted 5/12/2000 per 44738-5/19/2000; License granted 1/24/2000 per 44661-2/1/2000; |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| ALLOC Hilo   |      |                                  | HI |                   | *38 + II  | 0.0 0.0          | 0        | N 19° 43' 30.0" | W 155° 05' 24.0" | 129.5       | 166.5     | 96.60    |
| Cp cancelled 7/21/98 per 24290-7/24/98;  |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| NEW Hilo   | App  | Richard C & Lisa A. Goetz        | HI | BPTTL-20000821AHQ | 38 -      | 549.0            | 32       | N 19° 35' 00.0" | W 155° 07' 26.0" | 134.2       | 174.4     | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;   |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| KALO Honolulu  | CP   | Pacifica Broadcasting Company    | HI | BPET-20010308AAU  | *38 o II  | 579.0 709.0      | 206      | N 21° 23' 33.0" | W 158° 05' 43.0" | 293.5       | 200.7     | 96.60    |
| CP granted 12/20/2001 per 45139-12/27/2001;; DA: MIC 955518 @ 0.0°                           |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| NEW-T Waipahu  | App  | Garden Isle Cablevision          | HI | BPEX-19870707II   | 38        | 810.0            | 30.2     | N 21° 24' 13.0" | W 158° 06' 06.0" | 293.7       | 201.8     | LPTV     |
| To K43GN;; DA: ODD ODD870707 @ 296.0°  |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| KPXO Kaneohe   | App  | Paxson Hawaii License, Inc.      | HI | BPCT-20020111AAK  | 41 o II   | 632.0 757.0      | 80       | N 21° 19' 49.0" | W 157° 45' 24.0" | 296.0       | 165.8     | 96.60    |
| K42CO Honolulu   | Lic  | Oceania Broadcasting Network, In | HI | BLTTL-19960320JJ  | 42 +      | 757.1            | 13.1     | N 21° 19' 49.0" | W 157° 45' 25.0" | 296.0       | 165.8     | LPTV     |
| To channel 52;; Primary station: KAAH Honolulu, HI   |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| NEW Hilo   | App  | Trinity Broadcasting Network     | HI | BPTT-20000830ATB  | 42 -      | 528.5            | 20       | N 19° 35' 06.0" | W 155° 07' 10.0" | 134.1       | 174.6     | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;BT.5; N CMMN CXR; GR. ON REPORT 222014;    |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| NEW Hilo   | App  | Puri Family Limited Partnership  | HI | BPTTL-20000829AVO | 43 +      | 520.5            | 150      | N 19° 35' 18.0" | W 155° 07' 25.0" | 134.1       | 174.0     | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;   |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| NEW Kahului  | App  | Dean M. Mosely                   | HI | BPTTL-20000828AHL | 44 o      | 1984.1           | 50       | N 20° 46' 43.0" | W 156° 14' 51.0" | 34.7        | 12.94     | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;BT 1; N CMMN CXR;                          |      |                                  |    |                   |           |                  |          |                 |                  |             |           |          |
| NEW Kahului  | App  | Charles C. Townsend, III         | HI | BPTTL-20000828AFQ | 44 o      | 1984.0           | 50       | N 20° 46' 43.0" | W 156° 14' 51.0" | 34.7        | 12.94     | LPTV     |

LeSEA Engineering  
Indianapolis, IN

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Thursday, February 14, 2002

Dataworld Digital TV Spacing Study

## Title: KWHM-DTV45 Poli Poli Spacing

Latitude: N 20° 40' 58.0"

Channel: 45 Zone II (656-662 MHz) Digital

Longitude: W 156° 19' 07.0"

Database: DW 2/7/2002 6:02:39 PM

Safety Zone: 120.0 km

| Call City of License  | Auth | Licensee name                   | St | FCC File Number  | Chan Zone | HAAT(m) HAMSL(m) | ERP (kW) | Latitude Longitude               | Br-to -from | Dist (km)   | Req (km) |
|---|------|---------------------------------|----|------------------|-----------|------------------|----------|----------------------------------|-------------|-------------|----------|
| NEW Kailua-Kona   | App  | ESI Broadcasting Corporation    | HI | BPTT-20000828AIT | 44 -      | 1810.0           | 10       | N 19° 42' 56.0" W 155° 55' 00.0" | 158.6 338.8 | 115.0       | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;; DA: AND ALP8L2-HSWR @ 270.0°  |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| KWBN Honolulu   | Lic  | Ho'ona'auao Community TV, Inc.  | HI | BLET-19990803LC  | *44 o II  | 632.0 757.0      | 55       | N 21° 19' 49.0" W 157° 45' 24.0" | 296.0 115.5 | 165.8 59.81 | CLEAR    |
| KWOG changed back to KWBN 12-13-00 per Call Chg List #395 12-19-00.; License granted 5/12/2000 per 44738-5/19/2000; CP granted 2/28/1995 per 44225; |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| NEW Hilo  | App  | Dean M. Moseley                 | HI | BPTT-20000828AFF | 44 o      | 37.0             | 100      | N 19° 43' 51.0" W 155° 04' 11.0" | 128.9 309.3 | 167.8       | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;  |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| NEW Hilo  | App  | Charles C. Townsend, III        | HI | BPTT-20000828AVJ | 44 o      | 37.0             | 100      | N 19° 43' 51.0" W 155° 04' 11.0" | 128.9 309.3 | 167.8       | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;  |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| K44DQ Kaneohe   | Lic  | KFVE Joint Venture              | HI | BLTT-19981029JB  | 44        | 157.0            | 0.365    | N 21° 25' 31.0" W 157° 45' 37.0" | 299.2 118.6 | 170.9       | LPTV     |
| License granted 2/12/99 per 44431-2/18/99;; DA: SCA ODD930402WE @ 0.0°; Primary station: KFVE Honolulu, HI  |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| KWBN Honolulu   | CP   | Ho'ona'auao Community TV, Inc.  | HI | BPET-20010823ABJ | *44 o II  | 580.0 716.0      | 303      | N 21° 23' 45.0" W 158° 05' 58.0" | 293.5 112.9 | 201.2 95.24 | CLEAR    |
| KWOG changed back to KWBN 12-13-00 per Call Chg List #395 12-19-00.; CP granted 10/5/2001 per 45088-10/11/2001;; DA: MIC MCI 955518 @ 0.0°          |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| KUKO-LP Haleakala   | App  | Michael R. Durch                | HI | BPTT-20010613AET | 45 o      | 2989.0           | 150      | N 20° 42' 41.0" W 156° 15' 28.0" | 63.3 243.3  | 7.085       | LPTV     |
| N-CMMN CXR;; DA: ANT ACS24AR @ 320.0°   |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| K45CT Hilo  | Lic  | KFVE Joint Venture              | HI | BLTT-19940307IE  | 45 -      | 2503.9           | 91.8     | N 19° 35' 18.0" W 155° 27' 10.0" | 143.2 323.5 | 151.2       | LPTV     |
| DA: AND A16TR @ 0.0°; Primary station: KFVE Honolulu, HI  |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| NEW Lahaina   | App  | Trinity Broadcasting Network    | HI | BPTT-20000830ATC | 46 +      | 1387.0           | 20       | N 20° 39' 36.0" W 156° 21' 50.0" | 241.7 61.7  | 5.349       | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81;  |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| NEW Wailuku   | App  | Puri Family Limited Partnership | HI | BPTT-20000831COW | 46 -      | 3051.2           | 25       | N 20° 42' 40.0" W 156° 15' 34.0" | 62.9 242.9  | 6.916       | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81; BP-951103DA REINST EXP CP(23625-11/24/95);   |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| NEW Kahului   | App  | Dean M. Moseley                 | HI | BPTT-20000828AOA | 46 o      | 1984.1           | 50       | N 20° 46' 43.0" W 156° 14' 51.0" | 34.7 214.8  | 12.94       | LPTV     |
| Mutually Exclusive Proposal - LPTV Auction No. 81; N-CMMN CXR; BEAM TILT -.5;   |      |                                 |    |                  |           |                  |          |                                  |             |             |          |
| NEW Kahului   | App  | Charles C. Townsend, III        | HI | BPTT-20000828AGM | 46 o      | 1984.0           | 50       | N 20° 46' 43.0" W 156° 14' 51.0" | 34.7 214.8  | 12.94       | LPTV     |

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Indianapolis, IN**

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Thursday, February 14, 2002

Dataworld Digital TV Spacing Study

## Title: KWHM-DTV45 Poli Poli Spacing

Latitude: N 20° 40' 58.0"

Channel: 45 Zone II (656-662 MHz) Digital

Longitude: W 156° 19' 07.0"

Safety Zone: 120.0 km

Database: DW 2/7/2002 6:02:39 PM

Thursday, February 14, 2002

Dataworld Digital TV Spacing Study

**Title: KWHM-DTV45 Poli Poli Spacing**

Latitude: N 20° 40' 58.0"

Channel: 45 Zone II (656-662 MHz) Digital

Longitude: W 156° 19' 07.0"

Database: DW 2/7/2002 6:02:39 PM

Safety Zone: 120.0 km

| Call<br>City of License   | Auth | Licensee name                    | St | FCC File Number   | Chan<br>Zone | HAAT(m)<br>HAMSL(m) | ERP<br>(kW) | Latitude<br>Longitude               | Br-to<br>-from | Dist<br>(km) | Req<br>(km) |
|---|------|----------------------------------|----|-------------------|--------------|---------------------|-------------|-------------------------------------|----------------|--------------|-------------|
| NEW<br>Wailuku  | App  | KM Communications, Inc.          | HI | BPTTL-20000829AWV | 49 -         | 1391.0              | 150         | N 20° 39' 36.0"<br>W 156° 21' 50.0" | 241.7<br>61.7  | 5.349        | LPTV        |
| Mutually Exclusive Proposal - LPTV Auction No. 81;  |      |                                  |    |                   |              |                     |             |                                     |                |              |             |
| NEW<br>Kahului  | App  | Dean M. Mosely                   | HI | BPTTL-20000828AHJ | 49 o         | 1984.1              | 50          | N 20° 46' 43.0"<br>W 156° 14' 51.0" | 34.7<br>214.8  | 12.94        | LPTV        |
| Mutually Exclusive Proposal - LPTV Auction No. 81;BT 1,N-CMMN CXR;GR AUTH TO USE CHANNEL 2 ON A SECONDARY BASIS; REF 50134-CM-P-93; |      |                                  |    |                   |              |                     |             |                                     |                |              |             |
| NEW<br>Kahului  | App  | Charles C. Townsend, III         | HI | BPTTL-20000828AGJ | 49 o         | 1984.0              | 50          | N 20° 46' 43.0"<br>W 156° 14' 51.0" | 34.7<br>214.8  | 12.94        | LPTV        |
| FN# ALSO COVERS D1-D2; BAPLIF-950317DM TO: TROY STATE UNIV;   |      |                                  |    |                   |              |                     |             |                                     |                |              |             |
| NEW<br>KAILUA KONA  | App  | Puri Family Limited Partnership  | HI | BPTTL-20000831CEF | 49           | 1705.0              | 25          | N 19° 43' 03.0"<br>W 155° 55' 01.0" | 158.6<br>338.7 | 114.8        | LPTV        |
| Mutually Exclusive Proposal - LPTV Auction No. 81;EXT 941219DX (16089 1-17-95); GR, (22084 1/31/95);                                |      |                                  |    |                   |              |                     |             |                                     |                |              |             |
| NEW<br>Hilo   | App  | Word of God Fellowship, Inc.     | HI | BPTTL-20000831CLA | 49 +         | 355.0               | 150         | N 19° 43' 00.0"<br>W 155° 08' 13.0" | 130.9<br>311.3 | 163.4        | LPTV        |
| Mutually Exclusive Proposal - LPTV Auction No. 81;  |      |                                  |    |                   |              |                     |             |                                     |                |              |             |
| K42CO<br>Honolulu   | App  | Oceania Broadcasting Network, In | HI | BPTTL-20010424AAZ | 52 +         | 31.0                | 1.2         | N 21° 18' 11.0"<br>W 157° 51' 27.0" | 293.6<br>113.1 | 174.1        | LPTV        |
| From K42CO;BT -.5, N-CMMN CXR;; Primary station: KAAH Honolulu, HI  |      |                                  |    |                   |              |                     |             |                                     |                |              |             |
| NEW-T<br>Hilo   | App  | Trinity Broadcasting Network     | HI | BPTT-20000830AZB  | 52 -         | 529.0               | 20          | N 19° 35' 06.0"<br>W 155° 07' 10.0" | 134.1<br>314.5 | 174.6        | LPTV        |
| Proposed construction permits per Auct81-1 8/3/2001;  |      |                                  |    |                   |              |                     |             |                                     |                |              |             |
| NEW<br>Lahaina  | App  | Trinity Broadcasting Network     | HI | BPTT-20000830ATE  | 53 +         | 1387.0              | 20          | N 20° 39' 36.0"<br>W 156° 21' 50.0" | 241.7<br>61.7  | 5.349        | LPTV        |
| Mutually Exclusive Proposal - LPTV Auction No. 81;  |      |                                  |    |                   |              |                     |             |                                     |                |              |             |

>> End of channel 45 Zone II study <<

Dataworld Digital TV Spacing Study

**Title: KWHM-DTV45 Poli Poli Spacing**

Channel: 45 Zone II (656-662 MHz) Digital

Latitude: N 20° 40' 58.0"

Database: FCC 2/13/2002 1:54:03 PM

Longitude: W 156° 19' 07.0"

Safety Zone: 120.0 km

| Call City of License       | Auth | Licensee name                      | St | FCC File Number    | Chan Zone | HAAT(m) HAMSL(m) | ERP (kW) | Latitude                            | Br-to -from    | Dist (km)      | Req (km)       |
|----------------------------|------|------------------------------------|----|--------------------|-----------|------------------|----------|-------------------------------------|----------------|----------------|----------------|
| NEW KAHULUI                | APP  | CHARLES C. TOWNSEND, III           | HI | BNPTTL-20000828AFS | 38 -      | 1984.1           | 50       | N 20° 46' 43.0"<br>W 156° 14' 51.0" | 34.7<br>214.8  | 12.94          | LPTV           |
| NEW KAILUA-KONA            | APP  | TRINITY BROADCASTING NETWORK       | HI | BNPTT-20000830BPD  | 38 -      | 1691.5           | 10       | N 19° 43' 04.0"<br>W 155° 55' 00.0" | 158.6<br>338.7 | 114.8          | LPTV           |
| NEW KAILUA-KONA            | APP  | TRINITY BROADCASTING NETWORK       | HI | BNPTT-20000830BPD  | 38 -      | 1691.5           | 10       | N 19° 43' 04.0"<br>W 155° 55' 00.0" | 158.6<br>338.7 | 114.8          | LPTV           |
| KALO HONOLULU              | LIC  | PACIFICA BROADCASTING COMPANY      | HI | BLET-19990803LD    | 38 o II   | 632.0<br>757.0   | 51.3     | N 21° 19' 49.0"<br>W 157° 45' 24.0" | 296.0<br>115.5 | 165.8<br>69.21 | 96.60<br>CLEAR |
| ALLOC HILO                 |      |                                    | HI |                    | *38 + II  |                  |          | N 19° 43' 44.0"<br>W 155° 05' 31.0" | 129.4<br>309.9 | 166.1<br>69.49 | 96.60<br>CLEAR |
| NEW HILO                   | APP  | RICHARD C & LISA A. GOETZ          | HI | BNPTTL-20000821AHQ | 38 -      | 549.0            | 32       | N 19° 35' 00.0"<br>W 155° 07' 26.0" | 134.2<br>314.6 | 174.4          | LPTV           |
| NEW HILO                   | APP  | RICHARD C & LISA A. GOETZ          | HI | BNPTT-20000821AHQ  | 38 -      | 549.0            | 32       | N 19° 35' 00.0"<br>W 155° 07' 26.0" | 134.2<br>314.6 | 174.4          | LPTV           |
| KALO HONOLULU              | CP   | PACIFICA BROADCASTING COMPANY      | HI | BPET-20010308AAU   | 38 o II   | 579.0<br>709.0   | 206      | N 21° 23' 33.0"<br>W 158° 05' 43.0" | 293.5<br>112.9 | 200.7<br>104.1 | 96.60<br>CLEAR |
| DA: MC 955518 @ 0.0°       |      |                                    |    |                    |           |                  |          |                                     |                |                |                |
| K61BM WAIPAHU              | APP  | IRON COUNTY                        | HI | BRTT-19870707II    | 38        | 810.0            | 30.2     | N 21° 24' 13.0"<br>W 158° 06' 06.0" | 293.7<br>113.1 | 201.8          | LPTV           |
| DA: ODD ODD870707 @ 296.0° |      |                                    |    |                    |           |                  |          |                                     |                |                |                |
| KPXO KANEOHE               | APP  | PAXSON HAWAII LICENSE, INC.        | HI | BPCT-20020111AAK   | 41 o II   | 632.0<br>757.0   | 80       | N 21° 19' 49.0"<br>W 157° 45' 24.0" | 296.0<br>115.5 | 165.8<br>69.21 | 96.60<br>CLEAR |
| K42CO HONOLULU             | LIC  | OCEANIA BROADCASTING NETWORK, INC. | HI | BLTTL-19960320JJ   | 42 +      | 757.0            | 13.1     | N 21° 19' 49.0"<br>W 157° 45' 25.0" | 296.0<br>115.5 | 165.8          | LPTV           |
| NEW HILO                   | APP  | TRINITY BROADCASTING NETWORK       | HI | BNPTT-20000830ATB  | 42 -      | 528.5            | 20       | N 19° 35' 06.0"<br>W 155° 07' 10.0" | 134.1<br>314.5 | 174.6          | LPTV           |
| NEW HILO                   | APP  | PURI FAMILY PARTNERSHIP            | HI | BNPTT-20000829AVO  | 43 +      | 520.5            | 150      | N 19° 35' 18.0"<br>W 155° 07' 25.0" | 134.1<br>314.5 | 174.0          | LPTV           |
| NEW KAHULUI                | APP  | CHARLES C. TOWNSEND, III           | HI | BNPTTL-20000828AFQ | 44 o      | 1984.1           | 50       | N 20° 46' 43.0"<br>W 156° 14' 51.0" | 34.7<br>214.8  | 12.94          | LPTV           |
| NEW KAHULUI                | APP  | DEAN M. MOSELY                     | HI | BNPTTL-20000828AHL | 44 o      | 1984.1           | 50       | N 20° 46' 43.0"<br>W 156° 14' 51.0" | 34.7<br>214.8  | 12.94          | LPTV           |

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Indianapolis, IN**

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Dataworld Digital TV Spacing Study

**Title: KWHM-DTV45 Poli Poli Spacing**

Latitude: N 20° 40' 58.0"

Channel: 45 Zone II (656-662 MHz) Digital

Longitude: W 156° 19' 07.0"

Database: FCC 2/13/2002 1:54:03 PM

Safety Zone: 120.0 km

| Call City of License            | Auth | Licensee name                    | St | FCC File Number    | Chan Zone | HAAT(m) HAMSL(m) | ERP (kW) | Latitude        | Longitude        | Br-to -from | Dist (km) | Req (km) |
|---------------------------------|------|----------------------------------|----|--------------------|-----------|------------------|----------|-----------------|------------------|-------------|-----------|----------|
| NEW LAILUA-KONA                 | APP  | ESI BROADCASTING CORPORATION     | HI | BNPTTL-20000828AIT | 44 -      | 1810.2           | 10       | N 19° 42' 56.0" | W 155° 55' 00.0" | 158.6       | 115.0     | LPTV     |
| DA: AND ALP8L2-HSWR @ 270.0°    |      |                                  |    |                    |           |                  |          |                 |                  | 338.8       |           |          |
| KWBN HONOLULU                   | LIC  | HO'ONA'AUAO COMMUNITY TV, INC.   | HI | BLET-19990803LC    | 44 o II   | 632.0 757.0      | 55       | N 21° 19' 49.0" | W 157° 45' 24.0" | 296.0       | 165.8     | 106.0    |
| DA: SCA ODD930402WE @ 0.0°      |      |                                  |    |                    |           |                  |          |                 |                  | 115.5       | 59.81     | CLEAR    |
| NEW HILO                        | APP  | DEAN M. MOSELY                   | HI | BNPTTL-20000828AFF | 44 o      | 37.0             | 100      | N 19° 43' 51.0" | W 155° 04' 11.0" | 128.9       | 167.8     | LPTV     |
| NEW HILO                        | APP  | CHARLES C. TOWNSEND, III         | HI | BNPTTL-20000828AVJ | 44 o      | 37.0             | 100      | N 19° 43' 51.0" | W 155° 04' 11.0" | 128.9       | 167.8     | LPTV     |
| K44DQ KANEOHE                   | LIC  | RAYCOM NATIONAL, INC.            | HI | BLTT-19981029JB    | 44        | 157.0            | 0.365    | N 21° 25' 31.0" | W 157° 45' 37.0" | 299.2       | 170.9     | LPTV     |
| DA: SCA ODD930402WE @ 0.0°      |      |                                  |    |                    |           |                  |          |                 |                  | 118.6       |           |          |
| KWBN HONOLULU                   | CP   | HO'ONA'AUAO COMMUNITY TV, INC.   | HI | BPET-20010823ABJ   | 44 o II   | 580.0 716.0      | 303      | N 21° 23' 45.0" | W 158° 05' 58.0" | 293.5       | 201.2     | 106.0    |
| DA: MIC MCI 955518 @ 0.0°       |      |                                  |    |                    |           |                  |          |                 |                  | 112.9       | 95.24     | CLEAR    |
| KUKO-LP HALEAKALA               | APP  | MICHAEL R. DURCH                 | HI | BPTTL-20010613AET  | 45 o      | 2989.0           | 150      | N 20° 42' 41.0" | W 156° 15' 28.0" | 63.3        | 7.085     | LPTV     |
| DA: ANT ACS24AR @ 320.0°        |      |                                  |    |                    |           |                  |          |                 |                  | 243.3       |           |          |
| K45CT HILO                      | LIC  | RAYCOM NATIONAL, INC.            | HI | BLTT-19940307IE    | 45 -      | 2504.0           | 91.8     | N 19° 35' 18.0" | W 155° 27' 10.0" | 143.2       | 151.2     | LPTV     |
| DA: AND A16TR @ 80.0°           |      |                                  |    |                    |           |                  |          |                 |                  | 323.5       |           |          |
| K45CT HILO                      | APP  | RAYCOM NATIONAL, INC.            | HI | BMJPTT-20000824AEG | 45 -      | 40.0             | 150      | N 19° 43' 51.0" | W 155° 04' 11.0" | 128.9       | 167.8     | LPTV     |
| DA: AND ALP16M2-HSW-45 @ 240.0° |      |                                  |    |                    |           |                  |          |                 |                  | 309.3       |           |          |
| NEW LAHAINA                     | APP  | TRINITY BROADCASTING NETWORK     | HI | BNPTT-20000830ATC  | 46 +      | 1387.0           | 20       | N 20° 39' 36.0" | W 156° 21' 50.0" | 241.7       | 5.349     | LPTV     |
| NEW KULA                        | APP  | MARCIA T. TURNER tr/as TURNER EN | HI | BNPTTL-20000830AXS | 46 +      | 957.0            | 40       | N 20° 41' 19.0" | W 156° 22' 16.0" | 276.8       | 5.508     | LPTV     |
| NEW WAILUKU                     | APP  | PURI FAMILY LIMITED PARTNERSHIP  | HI | BNPTTL-20000831COW | 46 -      | 3051.2           | 25       | N 20° 42' 40.0" | W 156° 15' 34.0" | 62.9        | 6.916     | LPTV     |
| NEW KAHULUI                     | APP  | CHARLES C. TOWNSEND, III         | HI | BNPTTL-20000828AGM | 46 o      | 1984.1           | 50       | N 20° 46' 43.0" | W 156° 14' 51.0" | 34.7        | 12.94     | LPTV     |
| NEW KAHULUI                     | APP  | DEAN M. MOSELY                   | HI | BNPTTL-20000828AOA | 46 o      | 1984.3           | 50       | N 20° 46' 43.0" | W 156° 14' 51.0" | 34.7        | 12.94     | LPTV     |

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Thursday, February 14, 2002

Dataworld Digital TV Spacing Study

## Title: KWHM-DTV45 Poli Poli Spacing

Latitude: N 20° 40' 58.0"

Channel: 45 Zone II (656-662 MHz) Digital

Longitude: W 156° 19' 07.0"

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| Call City of License                          | Auth | Licensee name                    | St | FCC File Number    | Chan Zone | HAAT(m) HAMSL(m) | ERP (kW) | Latitude                         | Br-to- from | Dist (km)   | Req (km)    |
|---|------|----------------------------------|----|--------------------|-----------|------------------|----------|----------------------------------|-------------|-------------|-------------|
| NEW KAPALUA DA: PSI PSILP16BE @ 90.0°         | APP  | MARCIA T. TURNER tr/as TURNER EN | HI | BNPTTL-20000830AXS | 46 +      | 94.0             | 20       | N 20° 56' 59.0" W 156° 41' 40.0" | 307.3 127.2 | 49.03       | LPTV        |
| KHLU-LP HONOLULU DA: ANT ODDK60FJ @ 0.0°      | CP   | HTV/HTN/HAWAIIAN TV NETWORK, LTD | HI | BPTTL-JG0601CE     | 46 o      | 713.0            | 11.93    | N 21° 23' 45.0" W 158° 05' 58.0" | 293.5 112.9 | 201.2 95.24 | 106.0 CLEAR |
| NEW KAILUA-KONA                               | APP  | TRINITY BROADCASTING NETWORK     | HI | BNPTT-20000830BOM  | 47 -      | 1691.0           | 10       | N 19° 43' 04.0" W 155° 55' 00.0" | 158.6 338.7 | 114.8       | LPTV        |
| NEW KAILUA-KONA                               | APP  | KM COMMUNICATIONS, INC.          | HI | BNPTTL-20000829AXA | 47 -      | 1878.0           | 150      | N 19° 42' 56.0" W 155° 55' 00.0" | 158.6 338.8 | 115.0       | LPTV        |
| NEW KAILUA-KONA                               | APP  | KM COMMUNICATIONS, INC.          | HI | BNPTTL-20000829AXA | 47 -      | 1878.0           | 150      | N 19° 42' 56.0" W 155° 55' 00.0" | 158.6 338.8 | 115.0       | LPTV        |
| NEW KAILUA-KONA                               | APP  | KM COMMUNICATIONS, INC.          | HI | BNPTTL-20000829AXA | 47 -      | 1878.0           | 150      | N 19° 42' 56.0" W 155° 55' 00.0" | 158.6 338.8 | 115.0       | LPTV        |
| NEW HILO DA: PSI PSIP24BA @ 90.0°             | APP  | MARCIA T. TURNER tr/as TURNER EN | HI | BNPTTL-20000830AXQ | 47 o      | 549.0            | 5        | N 19° 35' 00.0" W 155° 07' 26.0" | 134.2 314.6 | 174.4       | LPTV        |
| NEW HILO                                      | APP  | MARCIA T. TURNER tr/as TURNER EN | HI | BNPTT-20000830AXQ  | 47 o      | 549.0            | 150      | N 19° 35' 00.0" W 155° 07' 26.0" | 134.2 314.6 | 174.4       | LPTV        |
| NEW KULA DA: SCA PR-450CU @ 335.0°            | APP  | WORD OF GOD FELLOWSHIP, INC.     | HI | BNPTTL-20000831CKF | 48 -      | 957.0            | 20       | N 20° 41' 16.0" W 156° 22' 16.0" | 275.8 95.8  | 5.498       | LPTV        |
| NEW WAILUKU DA: SCA (2) PR-450CU @ 0.0°       | APP  | WORD OF GOD FELLOWSHIP, INC.     | HI | BNPTTL-20000831CDZ | 48 +      | 230.0            | 5        | N 20° 44' 52.0" W 156° 00' 07.0" | 77.6 257.7  | 33.76       | LPTV        |
| NEW HILO                                      | APP  | DEAN M. MOSELY                   | HI | BNPTTL-20000828AFB | 48 o      | 37.0             | 100      | N 19° 43' 51.0" W 155° 04' 11.0" | 128.9 309.3 | 167.8       | LPTV        |
| NEW HILO                                      | APP  | CHARLES C. TOWNSEND, III         | HI | BNPTTL-20000828AVK | 48 o      | 37.0             | 100      | N 19° 43' 51.0" W 155° 04' 11.0" | 128.9 309.3 | 167.8       | LPTV        |
| NEW HILO                                      | APP  | TRINITY BROADCASTING NETWORK     | HI | BNPTT-20000830AYZ  | 48 -      | 528.5            | 20       | N 19° 35' 06.0" W 155° 07' 10.0" | 134.1 314.5 | 174.6       | LPTV        |
| KHHI-LP HONOLULU DA: ANT ODD951106IF @ 105.0° | LIC  | EQUITY BROADCASTING CORPORATION  | HI | BLTTL-19951129JA   | 48        | 713.0            | 32.8     | N 21° 23' 45.0" W 158° 05' 58.0" | 293.5 112.9 | 201.2       | LPTV        |

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Indianapolis, IN**

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Thursday, February 14, 2002

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Channel: 45 Zone II (656-662 MHz) Digital

Latitude: N 20° 40' 58.0"

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|---------------------------|------|----------------------------------|----|--------------------|-----------|------------------|----------|-------------------------------------|----------------|-----------|----------|
| NEW LAHAINA               | APP  | TRINITY BROADCASTING NETWORK     | HI | BNPTT-20000830ATD  | 49 +      |                  | 20       | N 20° 39' 36.0"<br>W 156° 21' 50.0" | 241.7<br>61.7  | 5.349     | LPTV     |
| NEW WAILUKU               | APP  | KM COMMUNICATIONS, INC.          | HI | BNPTTL-20000829AWV | 49 -      |                  | 150      | N 20° 39' 36.0"<br>W 156° 21' 50.0" | 241.7<br>61.7  | 5.349     | LPTV     |
| NEW KAHULUI               | APP  | CHARLES C. TOWNSEND, III         | HI | BNPTTL-20000828AGJ | 49 o      |                  | 50       | N 20° 46' 43.0"<br>W 156° 14' 51.0" | 34.7<br>214.8  | 12.94     | LPTV     |
| NEW KAHULUI               | APP  | DEAN M. MOSELY                   | HI | BNPTTL-20000828AHJ | 49 o      |                  | 50       | N 20° 46' 43.0"<br>W 156° 14' 51.0" | 34.7<br>214.8  | 12.94     | LPTV     |
| NEW KAILUA-KONA           | APP  | PURI FAMILY PARTNERSHIP          | HI | BNPTTL-20000831CEF | 49        |                  | 25       | N 19° 43' 03.0"<br>W 155° 55' 01.0" | 158.6<br>338.7 | 114.8     | LPTV     |
| NEW HILO                  | APP  | WORD OF GOD FELLOWSHIP, INC.     | HI | BNPTTL-20000831CLA | 49 +      |                  | 5        | N 19° 35' 00.0"<br>W 155° 07' 10.0" | 134.1<br>314.5 | 174.7     | LPTV     |
| DA: PSI PSILP16BA @ 90.0° |      |                                  |    |                    |           |                  |          |                                     |                |           |          |
| K42CO HONOLULU            | APP  | OCEANIA BROADCASTING NETWORK, IN | HI | BPTTL-20010424AAZ  | 52 +      |                  | 1.2      | N 21° 18' 11.0"<br>W 157° 51' 27.0" | 293.6<br>113.1 | 174.1     | LPTV     |
| DA: SCA CL-1469 @ 0.0°    |      |                                  |    |                    |           |                  |          |                                     |                |           |          |
| K52HB HILO                | CP   | TRINITY BROADCASTING NETWORK     | HI | BNPTT-20000830AZB  | 52 -      |                  | 20       | N 19° 35' 07.0"<br>W 155° 07' 15.0" | 134.1<br>314.5 | 174.5     | LPTV     |
| NEW LAHAINA               | APP  | TRINITY BROADCASTING NETWORK     | HI | BNPTT-20000830ATE  | 53 +      |                  | 20       | N 20° 39' 36.0"<br>W 156° 21' 50.0" | 241.7<br>61.7  | 5.349     | LPTV     |

>> End of channel 45 Zone II study <<

Exhibit No.  
E-4A

Dielectric

Date                   **13 Feb 2002**  
Call Letters       **KWHM-TV45** Channel  
Location           **Wailuku, Hawaii**  
Customer           **LeSEA Broadcasting Corporation**  
Antenna Type      **TUA-P2-10/20H-1**

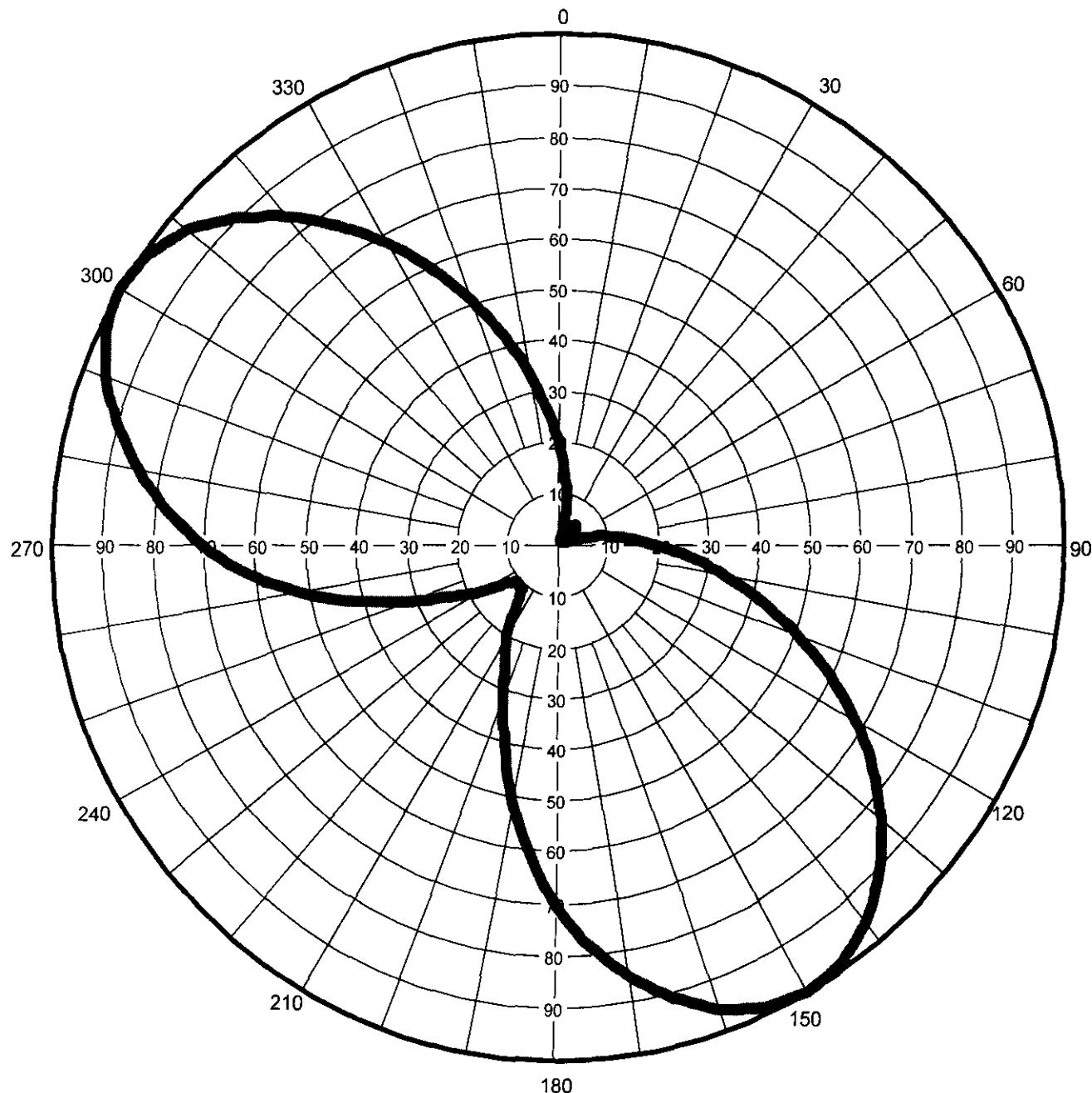
**AZIMUTH PATTERN**

RMS Gain at Main Lobe  
Calculated / Measured

**3.00 (4.77 dB)**  
**Calculated**

Frequency  
Drawing #

**MHz**  
**TUA-P2-45**



Remarks:      Prepared by: Douglas W. Garlinger

# Dielectric

Date                   **13 Feb 2002**  
Call Letters       **KWHM-TV45** Channel  
Location           **Wailuku, Hawaii**  
Customer           **LeSEA Broadcasting Corporation**  
Antenna Type      **TUA-P2-10/20H-1**

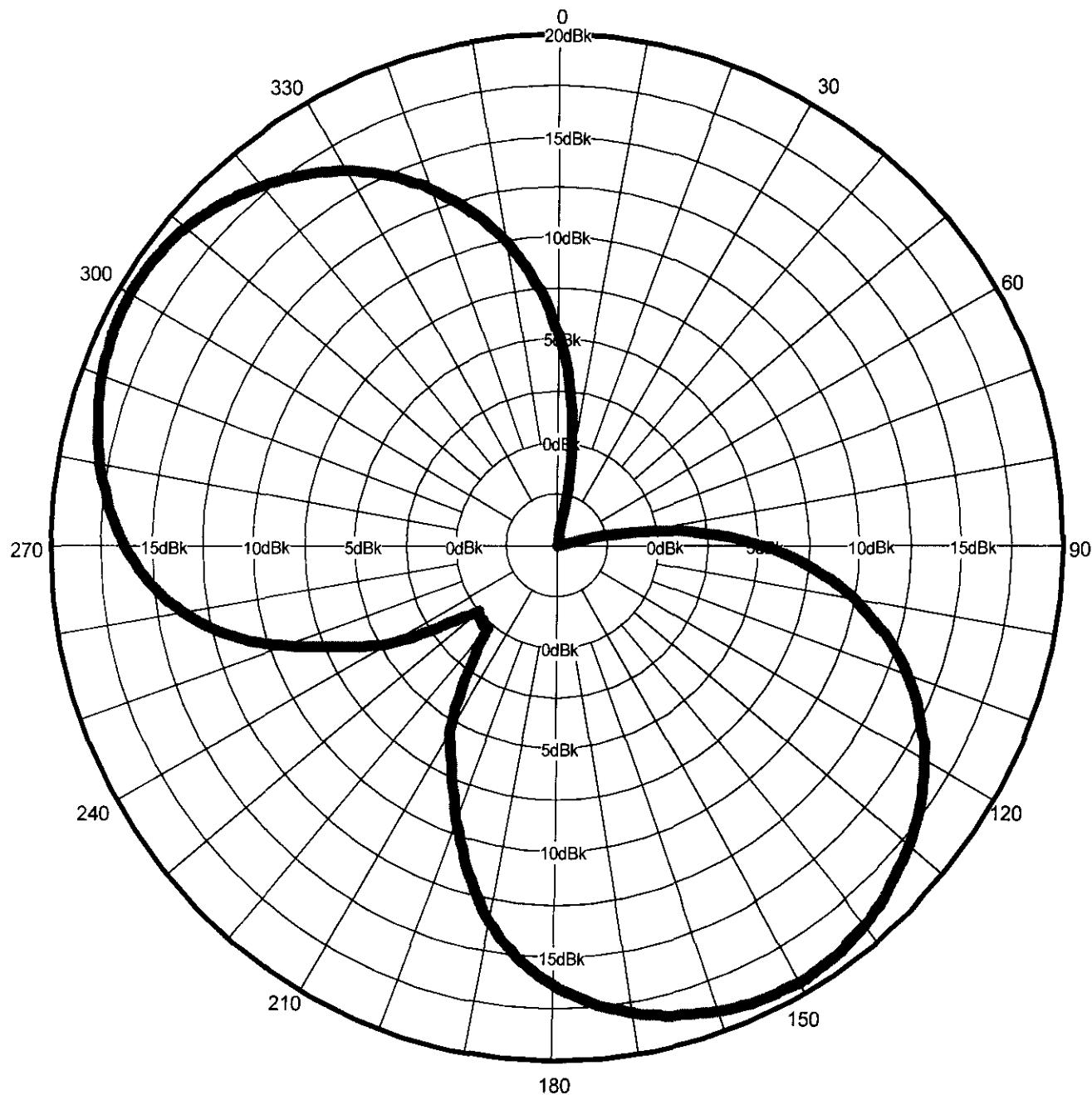
## AZIMUTH PATTERN

RMS Gain at Main Lobe  
Calculated / Measured

**3.00 (4.77 dB)**  
**Calculated**

Frequency  
Drawing #

**MHz**  
**TUA-P2-45**



Remarks:      Prepared by: Douglas W. Garlinger

# Dielectric

Date                    13 Feb 2002  
 Call Letters            KWHM-TV45 Channel  
 Location              Wailuku, Hawaii  
 Customer              LeSEA Broadcasting Corporation  
 Antenna Type          TUA-P2-10/20H-1

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing #      TUA-P2-45

| Angle | Field | ERP (kW) | ERP (dBk) |
|-------|-------|----------|-----------|
| 0     | 0.196 | 3.3      | 5.24      |
| 10    | 0.091 | 0.7      | -1.42     |
| 20    | 0.016 | 0.0      | -16.52    |
| 30    | 0.021 | 0.0      | -14.16    |
| 40    | 0.051 | 0.2      | -6.45     |
| 50    | 0.039 | 0.1      | -8.78     |
| 60    | 0.013 | 0.0      | -18.33    |
| 70    | 0.023 | 0.0      | -13.37    |
| 80    | 0.095 | 0.8      | -1.05     |
| 90    | 0.195 | 3.3      | 5.20      |
| 100   | 0.337 | 9.9      | 9.95      |
| 110   | 0.507 | 22.4     | 13.50     |
| 120   | 0.683 | 40.6     | 16.08     |
| 130   | 0.839 | 61.2     | 17.87     |
| 140   | 0.957 | 79.7     | 19.01     |
| 150   | 1.000 | 87.0     | 19.40     |
| 160   | 0.956 | 79.5     | 19.00     |
| 170   | 0.849 | 62.7     | 17.97     |
| 180   | 0.704 | 43.1     | 16.35     |
| 190   | 0.508 | 22.5     | 13.51     |
| 200   | 0.312 | 8.5      | 9.28      |
| 210   | 0.200 | 3.5      | 5.42      |
| 220   | 0.110 | 1.1      | 0.22      |
| 230   | 0.107 | 1.0      | -0.02     |
| 240   | 0.181 | 2.9      | 4.55      |
| 250   | 0.314 | 8.6      | 9.33      |
| 260   | 0.521 | 23.6     | 13.73     |
| 270   | 0.703 | 43.0     | 16.33     |
| 280   | 0.843 | 61.8     | 17.91     |
| 290   | 0.953 | 79.0     | 18.98     |
| 300   | 1.000 | 87.0     | 19.40     |
| 310   | 0.958 | 79.8     | 19.02     |
| 320   | 0.839 | 61.2     | 17.87     |
| 330   | 0.683 | 40.6     | 16.08     |
| 340   | 0.507 | 22.4     | 13.50     |
| 350   | 0.339 | 10.0     | 10.00     |

### Maxima

| Angle | Field | ERP (kW) | ERP (dBk) |
|-------|-------|----------|-----------|
| 43    | 0.052 | 0.2      | -6.28     |
| 150   | 1.000 | 87.0     | 19.40     |
| 222   | 0.112 | 1.1      | 0.38      |
| 227   | 0.110 | 1.1      | 0.22      |
| 300   | 1.000 | 87.0     | 19.40     |

### Minima

| Angle | Field | ERP (kW) | ERP (dBk) |
|-------|-------|----------|-----------|
| 24    | 0.009 | 0.0      | -21.52    |
| 58    | 0.009 | 0.0      | -21.52    |
| 220   | 0.110 | 1.1      | 0.22      |
| 225   | 0.109 | 1.0      | 0.14      |
| 230   | 0.107 | 1.0      | -0.02     |

# Dielectric

Date 13 Feb 2002  
 Call Letters KWHM-TV45 Channel  
 Location Wailuku, Hawaii  
 Customer LeSEA Broadcasting Corporation  
 Antenna Type TUA-P2-10/20H-1

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # TUA-P2-45

| Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0     | 0.196 | 45    | 0.051 | 90    | 0.195 | 135   | 0.905 | 180   | 0.704 | 225   | 0.109 | 270   | 0.703 | 315   | 0.905 |
| 1     | 0.185 | 46    | 0.049 | 91    | 0.208 | 136   | 0.915 | 181   | 0.686 | 226   | 0.110 | 271   | 0.718 | 316   | 0.892 |
| 2     | 0.173 | 47    | 0.047 | 92    | 0.221 | 137   | 0.926 | 182   | 0.668 | 227   | 0.110 | 272   | 0.733 | 317   | 0.879 |
| 3     | 0.162 | 48    | 0.045 | 93    | 0.235 | 138   | 0.936 | 183   | 0.650 | 228   | 0.109 | 273   | 0.748 | 318   | 0.865 |
| 4     | 0.150 | 49    | 0.042 | 94    | 0.248 | 139   | 0.947 | 184   | 0.631 | 229   | 0.108 | 274   | 0.762 | 319   | 0.852 |
| 5     | 0.138 | 50    | 0.039 | 95    | 0.261 | 140   | 0.957 | 185   | 0.611 | 230   | 0.107 | 275   | 0.776 | 320   | 0.839 |
| 6     | 0.129 | 51    | 0.035 | 96    | 0.276 | 141   | 0.964 | 186   | 0.591 | 231   | 0.111 | 276   | 0.790 | 321   | 0.824 |
| 7     | 0.120 | 52    | 0.031 | 97    | 0.291 | 142   | 0.970 | 187   | 0.571 | 232   | 0.114 | 277   | 0.803 | 322   | 0.809 |
| 8     | 0.111 | 53    | 0.027 | 98    | 0.307 | 143   | 0.977 | 188   | 0.550 | 233   | 0.118 | 278   | 0.816 | 323   | 0.794 |
| 9     | 0.101 | 54    | 0.023 | 99    | 0.322 | 144   | 0.983 | 189   | 0.529 | 234   | 0.122 | 279   | 0.830 | 324   | 0.779 |
| 10    | 0.091 | 55    | 0.019 | 100   | 0.337 | 145   | 0.990 | 190   | 0.508 | 235   | 0.127 | 280   | 0.843 | 325   | 0.763 |
| 11    | 0.083 | 56    | 0.015 | 101   | 0.353 | 146   | 0.992 | 191   | 0.487 | 236   | 0.138 | 281   | 0.855 | 326   | 0.747 |
| 12    | 0.075 | 57    | 0.011 | 102   | 0.370 | 147   | 0.994 | 192   | 0.466 | 237   | 0.149 | 282   | 0.866 | 327   | 0.731 |
| 13    | 0.067 | 58    | 0.009 | 103   | 0.386 | 148   | 0.996 | 193   | 0.445 | 238   | 0.160 | 283   | 0.878 | 328   | 0.715 |
| 14    | 0.059 | 59    | 0.010 | 104   | 0.403 | 149   | 0.998 | 194   | 0.424 | 239   | 0.171 | 284   | 0.890 | 329   | 0.699 |
| 15    | 0.050 | 60    | 0.013 | 105   | 0.419 | 150   | 1.000 | 195   | 0.403 | 240   | 0.181 | 285   | 0.903 | 330   | 0.683 |
| 16    | 0.043 | 61    | 0.013 | 106   | 0.437 | 151   | 0.997 | 196   | 0.383 | 241   | 0.190 | 286   | 0.912 | 331   | 0.666 |
| 17    | 0.036 | 62    | 0.013 | 107   | 0.454 | 152   | 0.995 | 197   | 0.364 | 242   | 0.200 | 287   | 0.922 | 332   | 0.648 |
| 18    | 0.029 | 63    | 0.013 | 108   | 0.472 | 153   | 0.992 | 198   | 0.346 | 243   | 0.210 | 288   | 0.932 | 333   | 0.631 |
| 19    | 0.023 | 64    | 0.014 | 109   | 0.489 | 154   | 0.990 | 199   | 0.329 | 244   | 0.221 | 289   | 0.943 | 334   | 0.613 |
| 20    | 0.016 | 65    | 0.014 | 110   | 0.507 | 155   | 0.988 | 200   | 0.312 | 245   | 0.232 | 290   | 0.953 | 335   | 0.595 |
| 21    | 0.013 | 66    | 0.016 | 111   | 0.525 | 156   | 0.981 | 201   | 0.297 | 246   | 0.247 | 291   | 0.960 | 336   | 0.578 |
| 22    | 0.010 | 67    | 0.017 | 112   | 0.542 | 157   | 0.975 | 202   | 0.283 | 247   | 0.262 | 292   | 0.966 | 337   | 0.560 |
| 23    | 0.009 | 68    | 0.019 | 113   | 0.560 | 158   | 0.968 | 203   | 0.270 | 248   | 0.279 | 293   | 0.973 | 338   | 0.542 |
| 24    | 0.009 | 69    | 0.021 | 114   | 0.578 | 159   | 0.962 | 204   | 0.257 | 249   | 0.296 | 294   | 0.980 | 339   | 0.525 |
| 25    | 0.010 | 70    | 0.023 | 115   | 0.595 | 160   | 0.956 | 205   | 0.245 | 250   | 0.314 | 295   | 0.987 | 340   | 0.507 |
| 26    | 0.012 | 71    | 0.029 | 116   | 0.613 | 161   | 0.946 | 206   | 0.236 | 251   | 0.334 | 296   | 0.989 | 341   | 0.489 |
| 27    | 0.014 | 72    | 0.036 | 117   | 0.631 | 162   | 0.936 | 207   | 0.227 | 252   | 0.353 | 297   | 0.992 | 342   | 0.472 |
| 28    | 0.016 | 73    | 0.043 | 118   | 0.648 | 163   | 0.927 | 208   | 0.218 | 253   | 0.374 | 298   | 0.994 | 343   | 0.454 |
| 29    | 0.018 | 74    | 0.050 | 119   | 0.666 | 164   | 0.917 | 209   | 0.209 | 254   | 0.395 | 299   | 0.997 | 344   | 0.437 |
| 30    | 0.021 | 75    | 0.056 | 120   | 0.683 | 165   | 0.908 | 210   | 0.200 | 255   | 0.415 | 300   | 1.000 | 345   | 0.420 |
| 31    | 0.025 | 76    | 0.064 | 121   | 0.699 | 166   | 0.896 | 211   | 0.189 | 256   | 0.437 | 301   | 0.998 | 346   | 0.403 |
| 32    | 0.028 | 77    | 0.072 | 122   | 0.715 | 167   | 0.884 | 212   | 0.178 | 257   | 0.458 | 302   | 0.996 | 347   | 0.387 |
| 33    | 0.032 | 78    | 0.080 | 123   | 0.731 | 168   | 0.873 | 213   | 0.166 | 258   | 0.480 | 303   | 0.994 | 348   | 0.371 |
| 34    | 0.036 | 79    | 0.088 | 124   | 0.747 | 169   | 0.861 | 214   | 0.155 | 259   | 0.501 | 304   | 0.992 | 349   | 0.355 |
| 35    | 0.039 | 80    | 0.095 | 125   | 0.764 | 170   | 0.849 | 215   | 0.143 | 260   | 0.521 | 305   | 0.990 | 350   | 0.339 |
| 36    | 0.042 | 81    | 0.104 | 126   | 0.779 | 171   | 0.836 | 216   | 0.136 | 261   | 0.542 | 306   | 0.983 | 351   | 0.323 |
| 37    | 0.045 | 82    | 0.113 | 127   | 0.794 | 172   | 0.823 | 217   | 0.130 | 262   | 0.561 | 307   | 0.977 | 352   | 0.308 |
| 38    | 0.047 | 83    | 0.122 | 128   | 0.809 | 173   | 0.809 | 218   | 0.123 | 263   | 0.581 | 308   | 0.971 | 353   | 0.293 |
| 39    | 0.049 | 84    | 0.130 | 129   | 0.824 | 174   | 0.796 | 219   | 0.117 | 264   | 0.600 | 309   | 0.964 | 354   | 0.278 |
| 40    | 0.051 | 85    | 0.138 | 130   | 0.839 | 175   | 0.782 | 220   | 0.110 | 265   | 0.618 | 310   | 0.958 | 355   | 0.263 |
| 41    | 0.052 | 86    | 0.150 | 131   | 0.852 | 176   | 0.767 | 221   | 0.111 | 266   | 0.636 | 311   | 0.947 | 356   | 0.250 |
| 42    | 0.052 | 87    | 0.161 | 132   | 0.865 | 177   | 0.751 | 222   | 0.112 | 267   | 0.653 | 312   | 0.937 | 357   | 0.236 |
| 43    | 0.052 | 88    | 0.173 | 133   | 0.879 | 178   | 0.736 | 223   | 0.112 | 268   | 0.670 | 313   | 0.926 | 358   | 0.223 |
| 44    | 0.052 | 89    | 0.184 | 134   | 0.892 | 179   | 0.720 | 224   | 0.111 | 269   | 0.687 | 314   | 0.916 | 359   | 0.209 |

Remarks: Prepared by: Douglas W. Garlinger

# Dielectric

Date                    13 Feb 2002  
Call Letters        KWHM-TV45 Channel  
Location              Wailuku, Hawaii  
Customer             LeSEA Broadcasting Corporation  
Antenna Type

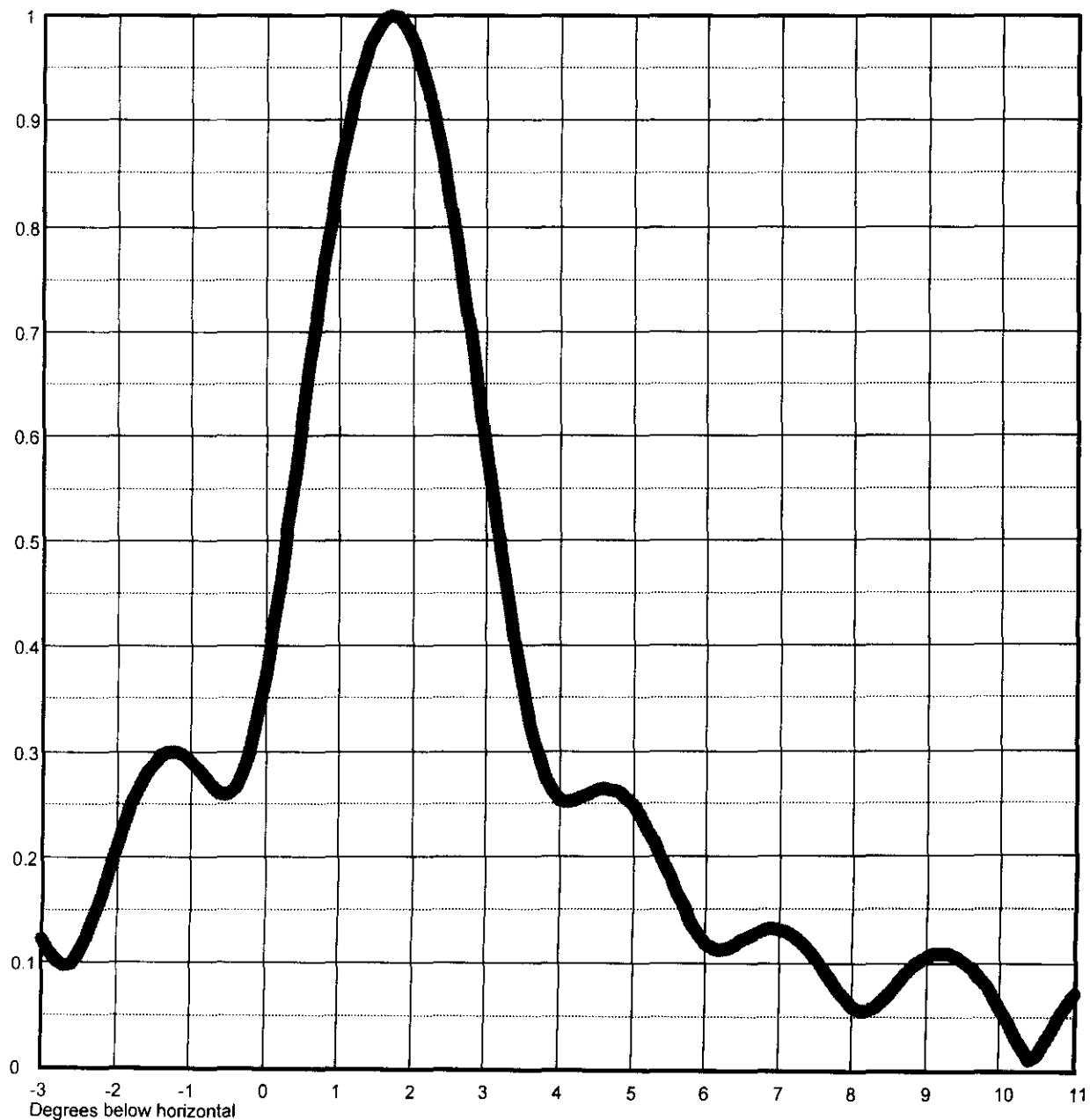
## ELEVATION PATTERN

RMS Gain at Main Lobe  
RMS Gain at Horizontal  
Calculated / Measured

20.7 (13.16 dB)  
2.9 (4.62 dB)  
Calculated

Beam Tilt  
Frequency  
Drawing #

1.70 Degrees  
MHz  
10U207170



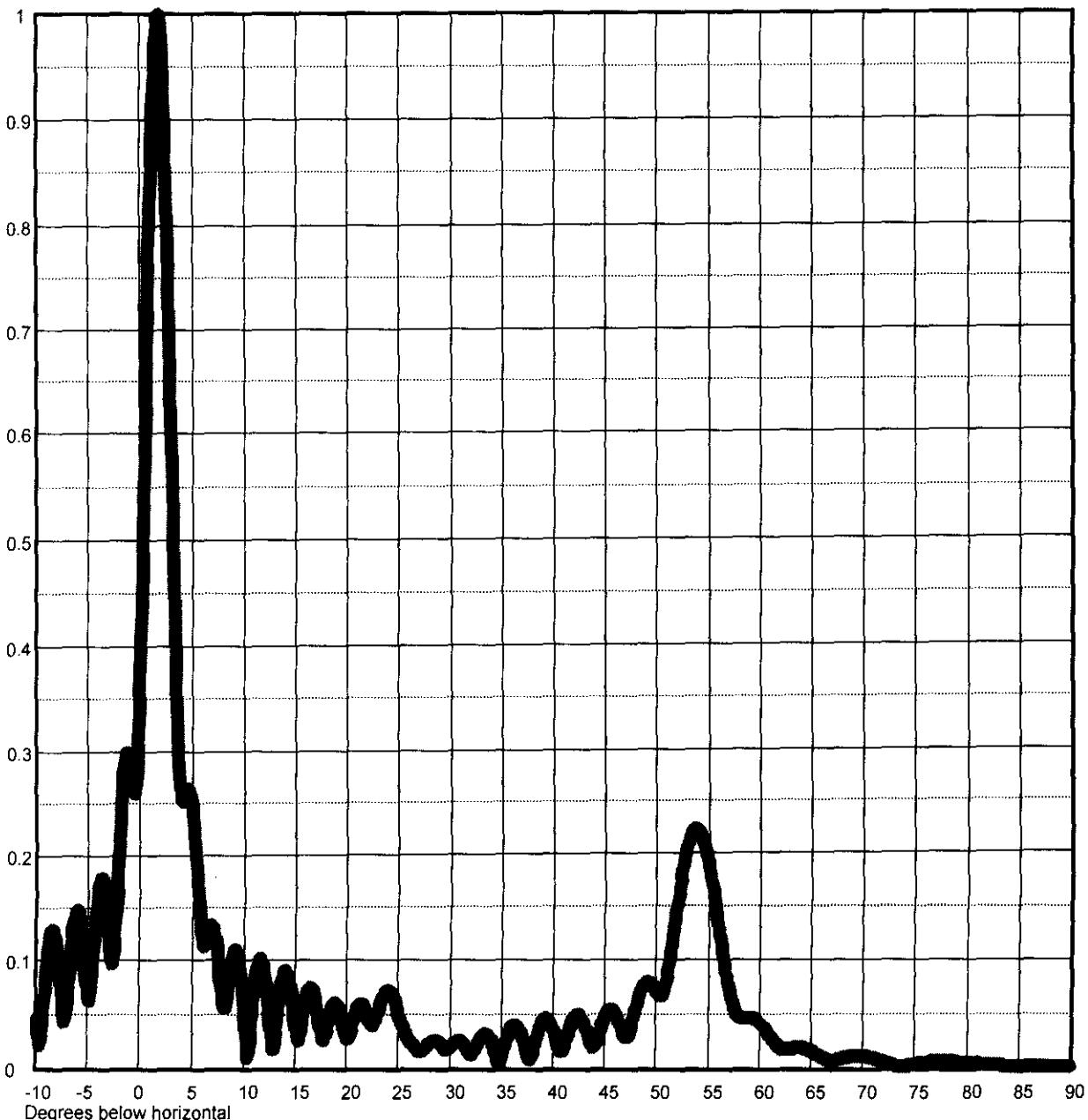
Remarks:      Prepared by: Douglas W. Garlinger

# Dielectric

Date 13 Feb 2002  
Call Letters KWHM-TV45 Channel  
Location Wailuku, Hawaii  
Customer LeSEA Broadcasting Corporation  
Antenna Type

## ELEVATION PATTERN

RMS Gain at Main Lobe 20.7 (13.16 dB)  
RMS Gain at Horizontal 2.9 (4.62 dB)  
Calculated / Measured Calculated Beam Tilt 1.70 Degrees  
MHz  
Drawing # 10U207170



Remarks: Prepared by: Douglas W. Garlinger

Exhibit No.  
E-4G

# Dielectric

Date 13 Feb 2002  
 Call Letters KWHM-TV45 Channel  
 Location Wailuku, Hawaii  
 Customer LeSEA Broadcasting Corporation  
 Antenna Type

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # 10U207170

| Angle | Field |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| -10.0 | 0.058 | 2.4   | 0.861 | 10.6  | 0.026 | 30.5  | 0.024 | 51.0  | 0.084 | 71.5  | 0.007 |
| -9.5  | 0.027 | 2.6   | 0.779 | 10.8  | 0.050 | 31.0  | 0.025 | 51.5  | 0.116 | 72.0  | 0.006 |
| -9.0  | 0.090 | 2.8   | 0.685 | 11.0  | 0.072 | 31.5  | 0.020 | 52.0  | 0.153 | 72.5  | 0.004 |
| -8.5  | 0.127 | 3.0   | 0.586 | 11.5  | 0.101 | 32.0  | 0.013 | 52.5  | 0.185 | 73.0  | 0.002 |
| -8.0  | 0.116 | 3.2   | 0.487 | 12.0  | 0.090 | 32.5  | 0.019 | 53.0  | 0.208 | 73.5  | 0.001 |
| -7.5  | 0.064 | 3.4   | 0.397 | 12.5  | 0.045 | 33.0  | 0.028 | 53.5  | 0.221 | 74.0  | 0.001 |
| -7.0  | 0.058 | 3.6   | 0.324 | 13.0  | 0.025 | 33.5  | 0.031 | 54.0  | 0.222 | 74.5  | 0.002 |
| -6.5  | 0.121 | 3.8   | 0.275 | 13.5  | 0.070 | 34.0  | 0.025 | 54.5  | 0.211 | 75.0  | 0.003 |
| -6.0  | 0.149 | 4.0   | 0.254 | 14.0  | 0.090 | 34.5  | 0.011 | 55.0  | 0.190 | 75.5  | 0.004 |
| -5.5  | 0.121 | 4.2   | 0.252 | 14.5  | 0.076 | 35.0  | 0.009 | 55.5  | 0.162 | 76.0  | 0.005 |
| -5.0  | 0.065 | 4.4   | 0.259 | 15.0  | 0.040 | 35.5  | 0.027 | 56.0  | 0.131 | 76.5  | 0.005 |
| -4.5  | 0.102 | 4.6   | 0.264 | 15.5  | 0.033 | 36.0  | 0.038 | 56.5  | 0.101 | 77.0  | 0.006 |
| -4.0  | 0.166 | 4.8   | 0.261 | 16.0  | 0.064 | 36.5  | 0.039 | 57.0  | 0.075 | 77.5  | 0.006 |
| -3.5  | 0.175 | 5.0   | 0.248 | 16.5  | 0.075 | 37.0  | 0.029 | 57.5  | 0.056 | 78.0  | 0.006 |
| -3.0  | 0.123 | 5.2   | 0.226 | 17.0  | 0.060 | 37.5  | 0.012 | 58.0  | 0.048 | 78.5  | 0.006 |
| -2.8  | 0.102 | 5.4   | 0.198 | 17.5  | 0.031 | 38.0  | 0.015 | 58.5  | 0.046 | 79.0  | 0.005 |
| -2.6  | 0.100 | 5.6   | 0.167 | 18.0  | 0.034 | 38.5  | 0.033 | 59.0  | 0.046 | 79.5  | 0.005 |
| -2.4  | 0.125 | 5.8   | 0.139 | 18.5  | 0.055 | 39.0  | 0.044 | 59.5  | 0.046 | 80.0  | 0.005 |
| -2.2  | 0.166 | 6.0   | 0.120 | 19.0  | 0.059 | 39.5  | 0.045 | 60.0  | 0.042 | 80.5  | 0.004 |
| -2.0  | 0.210 | 6.2   | 0.114 | 19.5  | 0.044 | 40.0  | 0.035 | 60.5  | 0.036 | 81.0  | 0.004 |
| -1.8  | 0.249 | 6.4   | 0.118 | 20.0  | 0.026 | 40.5  | 0.020 | 61.0  | 0.029 | 81.5  | 0.004 |
| -1.6  | 0.278 | 6.6   | 0.127 | 20.5  | 0.038 | 41.0  | 0.018 | 61.5  | 0.023 | 82.0  | 0.003 |
| -1.4  | 0.295 | 6.8   | 0.133 | 21.0  | 0.056 | 41.5  | 0.034 | 62.0  | 0.019 | 82.5  | 0.003 |
| -1.2  | 0.299 | 7.0   | 0.133 | 21.5  | 0.058 | 42.0  | 0.046 | 62.5  | 0.017 | 83.0  | 0.002 |
| -1.0  | 0.290 | 7.2   | 0.127 | 22.0  | 0.047 | 42.5  | 0.049 | 63.0  | 0.018 | 83.5  | 0.002 |
| -0.8  | 0.273 | 7.4   | 0.114 | 22.5  | 0.040 | 43.0  | 0.041 | 63.5  | 0.018 | 84.0  | 0.002 |
| -0.6  | 0.260 | 7.6   | 0.095 | 23.0  | 0.051 | 43.5  | 0.027 | 64.0  | 0.019 | 84.5  | 0.002 |
| -0.4  | 0.265 | 7.8   | 0.075 | 23.5  | 0.067 | 44.0  | 0.020 | 64.5  | 0.018 | 85.0  | 0.001 |
| -0.2  | 0.304 | 8.0   | 0.060 | 24.0  | 0.072 | 44.5  | 0.033 | 65.0  | 0.016 | 85.5  | 0.001 |
| 0.0   | 0.373 | 8.2   | 0.056 | 24.5  | 0.066 | 45.0  | 0.048 | 65.5  | 0.013 | 86.0  | 0.001 |
| 0.2   | 0.465 | 8.4   | 0.066 | 25.0  | 0.049 | 45.5  | 0.054 | 66.0  | 0.010 | 86.5  | 0.001 |
| 0.4   | 0.567 | 8.6   | 0.082 | 25.5  | 0.037 | 46.0  | 0.051 | 66.5  | 0.008 | 87.0  | 0.001 |
| 0.6   | 0.671 | 8.8   | 0.097 | 26.0  | 0.024 | 46.5  | 0.039 | 67.0  | 0.007 | 87.5  | 0.001 |
| 0.8   | 0.769 | 9.0   | 0.107 | 26.5  | 0.021 | 47.0  | 0.028 | 67.5  | 0.007 | 88.0  | 0.001 |
| 1.0   | 0.855 | 9.2   | 0.111 | 27.0  | 0.016 | 47.5  | 0.037 | 68.0  | 0.009 | 88.5  | 0.001 |
| 1.2   | 0.924 | 9.4   | 0.107 | 27.5  | 0.018 | 48.0  | 0.056 | 68.5  | 0.010 | 89.0  | 0.001 |
| 1.4   | 0.972 | 9.6   | 0.096 | 28.0  | 0.023 | 48.5  | 0.072 | 69.0  | 0.011 | 89.5  | 0.001 |
| 1.6   | 0.997 | 9.8   | 0.079 | 28.5  | 0.026 | 49.0  | 0.080 | 69.5  | 0.011 | 90.0  | 0.001 |
| 1.8   | 0.997 | 10.0  | 0.057 | 29.0  | 0.023 | 49.5  | 0.077 | 70.0  | 0.011 |       |       |
| 2.0   | 0.974 | 10.2  | 0.032 | 29.5  | 0.018 | 50.0  | 0.069 | 70.5  | 0.010 |       |       |
| 2.2   | 0.928 | 10.4  | 0.009 | 30.0  | 0.019 | 50.5  | 0.067 | 71.0  | 0.009 |       |       |

Remarks: Prepared by: Douglas W. Garlinger